Howdy from the Bradford County Extension Office!!!

Summer is in full swing and our afternoon showers are almost like clockwork. I hope everyone has had enough rain to maximize hay production and pasture yields, but not so much you are bogged down in rotten hay. I would encourage everyone that has bailed hay to take a forage sample and have it tested. If your hay stayed in the field and over matured, it may have reduced crude protein and TDN. Having this information will be useful when you begin feeding hay during the winter to balance your rations.

In this issue of the Range Review, I will discuss using artificial insemination on the farm, beef cattle management tips related to culling and our beef management calendar. I’ve also included an insert of our office’s 3rd Quarter Calendar of Events. We plan to use this insert as a quick reference to let everyone know of the many programs our office provides to the public. Agents in our office cover a wide variety of topics that may surprise even our frequent clientele.

On a different note, the Range Review is going to move into the digital age. To save on paper (thinking GREEN) and postage, this newsletter will be emailed to all recipients that provide their email. However, for those who prefer a paper copy, we will continue to mail a hard copy. In order to stay on my mailing list, please fill-out the enclosed purge slip and send it back to my office or call (904-964-6224) at your convenience.

If you would like to attend any of these programs listed in this newsletter or, if you have any questions related to livestock and forages, please feel free to give me a call at any time.

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Using Artificial Insemination on the Farm

Often technology may seem difficult to understand, and even more difficult to implement in a real world setting. When considering methods of breeding, producers have two basic options: "Artificial Insemination" (AI) or "Natural Service" (NS). Most producers purchase a bull that has the biggest "bang for the buck" in regards to genetics, appearance and price, while others try to take advantage of genetic potential by using improved technology such as artificial insemination or embryo transfer.

During the past 50 years, advances in reproductive technology have dramatically improved AI conception rates. Equipment and procedural techniques are continuously updated and finely tuned to further enhance production capabilities. Although these improvements have been successful, less than 5 – 10% of beef producers utilize this technology (Figure 1).

Some advantages for using AI include: improved genetics, disease control, marketing potential, use of proven sires, and evaluation of fertility.

Although these advantages can be seen with AI, producers should not overlook the importance of maintaining quality clean-up bulls. Many time-breed estrous synchronization protocols yield conception rates from 40 – 50% and herds that are bred based on standing heats might expect 50 – 90%. Essentially, there will be a percentage of your herd that will need to be bred by a quality clean-up bull.

Prior to implementing an AI breeding program, producers should evaluate and make any necessary repairs to facilities or equipment. A breeding plan is necessary to offer a timeline for procedures to ensure each is performed at the necessary time. Once females have been bred, a minimum of two weeks should pass before being exposed to a clean-up bull.

Approximately 45 – 60 days after the completion of the AI breeding season, a pregnancy evaluation should be performed by a veterinarian to determine the pregnancy status of each female. This evaluation is important to determine if a calf is the result of AI or NS. When clean-up bulls are removed from the herd, an additional pregnancy evaluation should be performed to identify open females. Open cattle should be culled based on their inability to conceive.

![Figure 1. Percent of operations that used the following breeding methods for females calving in 1996.](source: Adapted NAHMS, June 1997)
Beef Cattle Management Tips: Culling

Many cow-calf producers are excited when they market their calves. When evaluating the economics behind cow-calf enterprises, producers profit by marketing calves by weight, genetics and sometimes by both. Although these calves generate most of their income, approximately 10 to 20% of their gross income can be determined by the price they receive from their cull cows (Gill, TAMU).

Culling is an important component when managing beef cattle and should not be overlooked. Producers who develop predetermined production goals can successfully cull cattle from the herd each year.

As with bulls, cows should be evaluated for soundness. Since calves initially receive their nutrients through milk, the cows’ udder must be sound. Cows must also have enough teeth for nutritional maintenance. Failure to adequately supply enough nutrients for the cow can result in reduced subsequent reproductive capabilities. Soundness must be evaluated and considered when culling.

All breeding-age females in a cow-calf operation must be able to successfully wean a calf each year. To do this, these females must deliver a healthy, live calf, provide milk and be able to become pregnant during the subsequent breeding season. To perform each of these tasks, these females must be reproductively sound. Research from Texas A&M reports that if a cow does not breed during a breeding season, she will lose 15 to 20% of her lifetime production potential (TAMU BCM-7). Determining if, or how many times, a female can remain in a herd after she has been determined not pregnant is a decision that must be considered when culling.

Unlike other commodities that change varieties each year, beef cows may remain in a herd for 10 to 15 years. The goal of most cow/calf managers is to couple the genetics of the cow and bull to produce a calf that should outperform its parents. Cows that produce poor-performing calves should be considered for culling. However, if she has produced excellent calves in the past, it may be the result of the bull. Regardless, decisions related to the performance of the calf should be made to enhance future production potential.

Structural soundness, reproductive soundness and calf performance are just some of the many criteria that producers use when determining which cows to cull. Producers should determine their production parameters and cull accordingly.
# Beef Management Calendar

## August
- Control flies
- Plan for winter forage planting
- Check water and mineral supplies often
- Store hay in barn or on dry, well-drained areas and cover them to prevent nutrient loss.
- Evaluate body condition
- Pregnancy check cattle after breeding season is complete and cull non-pregnant cattle

## September
- Prepare or begin planting winter pastures.
- Check hay stores and start planning winter needs
- Check commodity prices and purchase when prices are low
- Control flies
- Check mineral feeders and water supply to make sure cattle have free-choice access
- Cull non-pregnant cattle

(Source: Silcox and McCann)